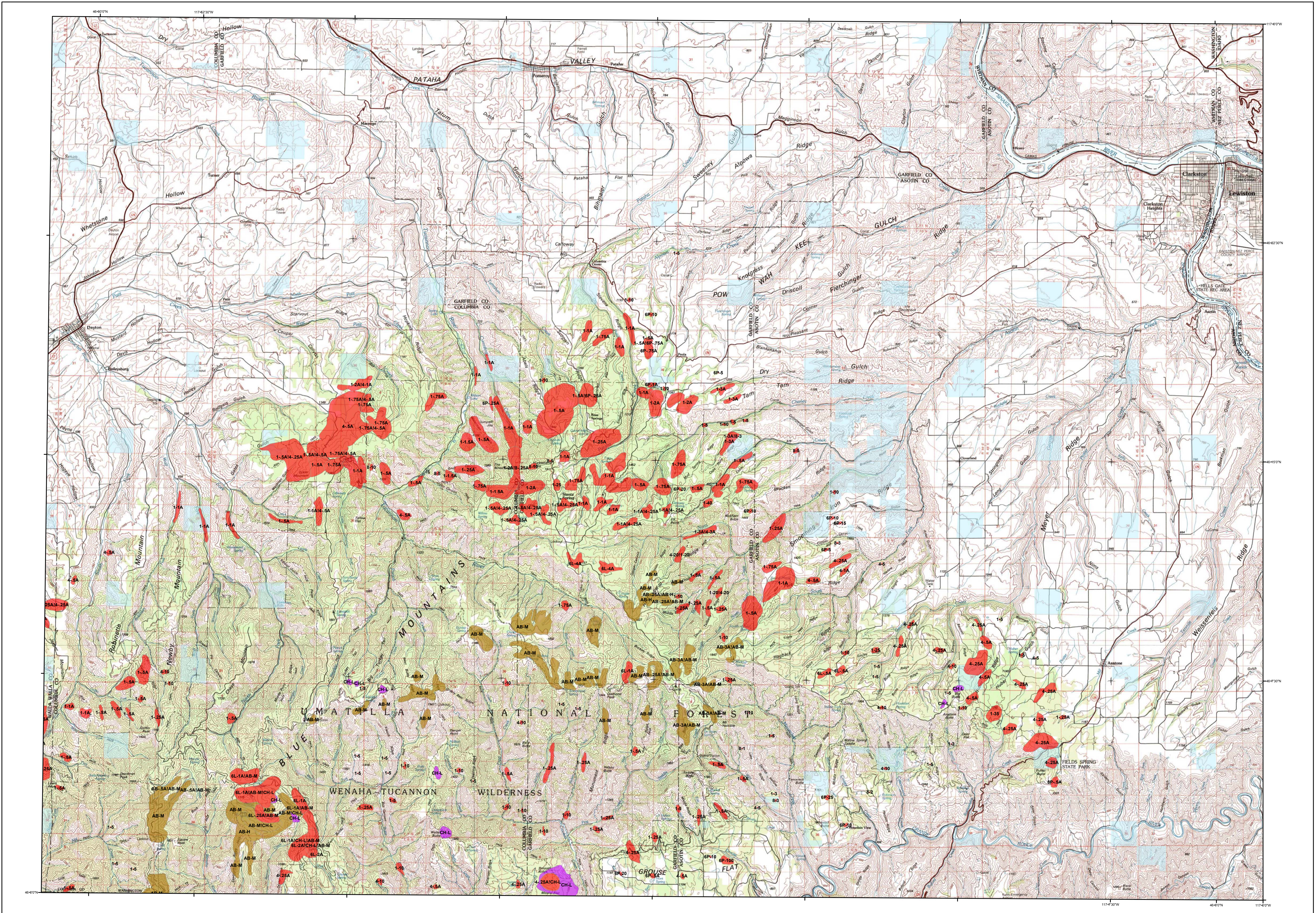


2007 Aerial Insect and Disease Survey
USGS 100K Quad: Clarkston - A146117; 8F



Mortality Agents

Defoliators

| Code | Damaging Agent | Primary Host |
|------|-------------------------------------|-------------------------------|
| AA | Asian hornbill | Sitka spruce |
| BB | Western blackheaded butworm | Hemlock, spruce, true fir |
| BA | Moist wood borer | White fir |
| BS | Sitka spruce sawfly | Lodgepole, ponderosa pines |
| BS | Western spruce sawfly | True fir, Douglas-fir, spruce |
| CB | Western light-colored spruce sawfly | Ponderosa pine |
| CH | Larch | Western larch |
| HL | Western hemlock looper | Western hemlock looper |
| LG | Green striped teardrop looper | Douglas-fir, Western hemlock |
| LC | Larch looper | Larch |
| LS | Black pine needle scale | Ponderosa pine |
| HL | Green spruce budmoth | Western hemlock looper |
| ML | Larch budmoth | Western larch |
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USGS 100K Quad: Clarkston - A146117; 8F
2007 Aerial Insect and Disease Detection Survey
Mapscale: 1:100,000
Date: December 4, 2007

Legend

Defoliating Agents

Mortality Agents

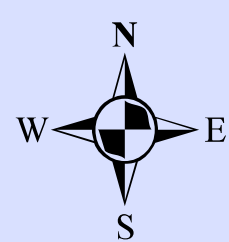
Other Damage

WaDNR Managed Lands
Source: Washington Dept. of Natural Resources

Source: Washington Dept. of Natural Resources

2007 Large Fires

Source: Northwest Coordination Center



Vicinity Map

The map base was created with TOPO! (Copyright 2001, National Geographic); available online at: www.ngmapstore.com

A data dictionary, digital copies of this map and Arcgis insect and disease data are available at: www.fs.fed.us/r6/nr/fid/data.shtml

How the Aerial Surveys Are Conducted

Data represented on this map are based on trees visibly affected by forest insects and diseases detected and recorded during aerial survey flights conducted by the USDA Forest Service and the Washington Department of Natural Resources. Observers have just a few seconds to recognize the color difference between healthy and damaged trees of different species; diagnose causal agents correctly; estimate intensity; delineate the extent of damage; and precisely record this information on a georeferenced, digital map. Air turbulence, cloud shadows, distance from aircraft, haze, smoke and observer experience can all affect the quality of the survey. These data summaries provide an estimate of conditions on the ground and may differ from estimates derived by other methods.

The aerial survey provides information on the current status for many causal agents, and is important when examining insect activity trends by comparing historical and current survey data over large areas.

Overview surveys are a 'snap shot' in time and therefore may not be timed to accurately capture the true extent or severity of a particular disturbance activity. Specially designed surveys with modified flight patterns and timing may be conducted to more accurately delineate the extent and severity of a particular disturbance agent. Special surveys, such as Swiss needle cast surveys, are conducted when resources are available to address situations of sufficient economic, political or environmental importance.

DIRECT ALL INQUIRIES TO:

Washington State Department of
Natural Resources
Resource Protection
Forest Health
1111 Washington St. SE
Olympia, WA 98504

-- OR --

USDA Forest Service, Region 6
Natural Resources
Forest Health Protection
PO Box 3623
Portland, Oregon 97208



*****DISCLAIMER*****

The insect and disease data presented should only be used as an indicator of insect and disease activity, and should be ground-checked for precise location, extent, severity and causal agent.

Color coded polygons show locations where trees were recently killed or defoliated. Intensity of damage is variable and not all trees within coded polygons are dead or defoliated.

The cooperators reserve the right to correct, update, modify or replace GIS products without notice. Using this map for purposes other than those for which it was intended may yield inaccurate or misleading results.